DOCUMENT RESUME

ED 082 292 EA 005 369

AUTHOR	Cockburn, Ilze, Comp.
TITLE	The Open School. An Annotated Bibliography. Current Bibliography No. 4.
INSTITUTION	Ontario Inst. for Studies in Education, Toronto. Library.
PUB DATE	Jun 73
NOTE	41p.
AVAILABLE FROM	Publication Sales, Ontario Institute for Studies in Education, 252 Bloor Street West, Toronto M5S IV6, Ontario (Canada) ($2.25)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Annotated Bibliographies; Literature Reviews; *Open Education; *Open Plan Schools; *Resource Materials; *School Environment

ABSTRACT

In 1970, the OISE library published an annotated bibliography entitled, Open Plan (See ED 051 549), that covered the design of open plan schools and the educational practices connected with these facilities. Since then, a clearer distinction has developed between the terms "open plan" and "open education." This revision of the earlier volume covers both these aspects of openness, but in two separate parts. Part I covers open education. Much of the current literature on open education is concerned with (1) evolving a theory to support or validate existing practices and (2) with developing criteria to measure the openness of programs to provide a framework for research. The items in this section are arranged under general; theory, analyses, definitions; and research. Part II covers open plan schools. The earlier concentration on design and construction has changed to an emphasis on the assessment of the effects of open space on students, teachers, and educational programs. Thus there is an expanding literature of research. The items in this section are arranged under designs and descriptions, and research. The overall concentration is on selected references to materials published since 1970, but a few basic items and pertinent Canadian references from the earlier bibliography are also included. Those items available from the ERIC document reproduction service are so indicated. (Compiler/EA)

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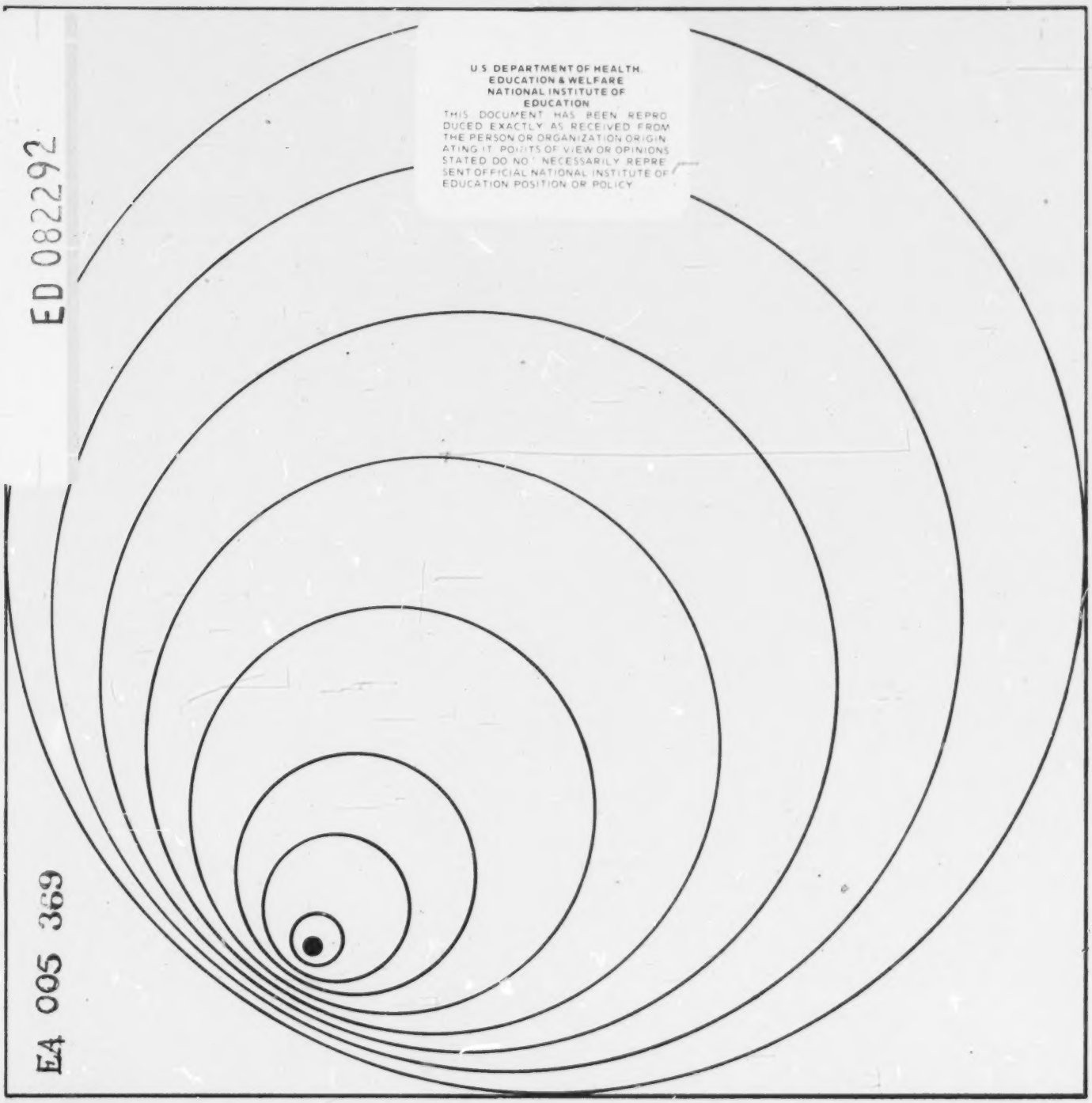

THE OPEN SCHOOL

An Informal Publication of
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Current Bibliography No. 4

ED 082292

THE OPEN SCHOOL

AN ANNOTATED BIBLIOGRAPHY

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June 1973

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INTRODUCTION

In 1970 the Library at The Ontario Institute for Studies in Education published Open Plan, an annotated bibliography on the design of open-plan schools and the educational practices connected with these facilities. Since then a clearer distinction has developed between the terms "open plan" and "open education." Although related, the two are not exclusively dependent on each other; open education can be practiced in schools of conventional design, and open-plan schools may have traditional educational programs.[1] This revision of Open Plan still covers both these aspects of openness in two separate parts: Part I, "Open Education" and Part II, "Open Plan." To embrace both of these concepts without undue stress on either, a new title The Open School was chosen. The concentration is on selected references to material published since 1970, but a few basic items and pertinent Canadian references from the earlier bibliography have also been included.

Although the term "open education" has entered common usage, many educators continue to find it difficult to define. In response to this need, Dr. Donald F. Muselia of The Ontario Institute for Studies in Education, Toronto, Ontario, has formulated this definition: "Open education is education that maximizes student choice in all dimensions of schooling. It can be considered a multi-dimensional set of concepts which describe a school or classroom along a continuum of openness." Much of the current literature on open education is concerned with evolving a theory to support or validate existing practices and with developing criteria to measure the openness of programs and to provide a framework for research. Even though research on open education does exist, it is difficult to evaluate since in most cases the specifications of the programs studied are not clear.

For Part II, "Open Plan," the definition by Frank A. Brunetti, "... open space school is composed of instructional areas without interior walls, ranging in size from two to over thirty equivalent classrooms,"[2] was used as the guideline for selecting material. The earlier concentration on design and construction has changed to an emphasis on assessment of the effects of open space on students, teachers, and educational programs. Thus there is an expanding literature of research. Again there are problems in assessing the validity of the conclusions of many of the studies mainly because it is hard to isolate space as the only variable.

The concern with research and evaluation in relation to both open education and open space is a hopeful sign that they will not be just passing educational fads but will make a lasting contribution to the educational systems of Canada and the United States.

The Library would like to thank the Office of the Coordinator of Field Development, The Ontario Institute for Studies in Education, for the continuing encouragement and support that helped to ensure the production of this bibliography.

[1]R.E. Traub and others, "Closure on Openness: Describing and Quantifying Open Education," Interchange, III (No. 2/3, 1972), p. 69-70.

[2]Frank A. Brunetti and others, "Studies of Team Teaching in the Open-Space School," Interchange, III (No. 2/3, 1972), p. 86.

AVAILABILITY OF MATERIAL INCLUDED IN THE BIBLIOGRAPHY

Most items in the bibliography are available in the OISE Library. We welcome visits from school administrators or teachers engaged in research for their boards or schools who wish to use the Library's facilities. However, heavy demands on our collection by the graduate students, the teaching and the research staff of the Institute make it necessary for us to place certain restrictions on lending material.

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In general, this material is not available for loan to individuals other than our own staff or students. However, we will lend items to other libraries (through use of official Interlibrary Loan forms) if they cannot be readily obtained elsewhere. Interlibrary loan can be obtained through any regional public library system.

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The OISE Library journal collection does not circulate, but we will supply single photocopies of articles. A charge of 10¢ per print is made to cover cost of reproducing material. In cases where journals are held on microfilm the charge is 15¢ per print.

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A number of references have been taken from the U.S. Office of Education publication Research in Education, a monthly abstract journal that brings to the attention of researchers the vast number of reports accumulated by ERIC (Educational Resources Information Center) clearinghouses throughout the United States.

These items are identified in the bibliography by an "ED" number and in most cases items are available from ERIC Document Reproduction Service in "print" form or on microfiche at a lesser cost. (Microfiche is a method of reproducing up to sixty pages of text on a 4" x 6" sheet of film which must be used with a special reader to enlarge the print.) The OISE Library subscribes to all ERIC microfiche and these are available for reading in the Library. Print or microfiche copies of reports may be obtained from -

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I. OPEN EDUCATION

A. General

1. Books, Reports, Films

1 Andreae, Jennifer and others. Open Education: ESEA Title I. Albany, N.Y.: New York State Education Department, Division of Education for the Disadvantaged, 1970. (Available from ERIC Document Reproduction Service ED 059 334).

An extensive account of the process of implementing open education in New Rochelle, New York. Special attention is placed on the changing roles of the staff.

2 Ashton-Warner, Sylvia. Spearpoint - Teacher in America. New York: Knopf, 1972.

A very subjective description of the author's experiences at a new open school in Colorado. Of particular interest is her honest attempt to deal with the concept of freedom in education.

3 Barth, Roland S. and Rathbone, Charles H. A Bibliography of Open Education. Cambridge, Mass.: Advisory for Open Education, 1971.

A comprehensive bibliography with evaluative annotations on all aspects of open education compiled by two authorities on the subject. Included are a list of periodicals on open education or related topics and a section on curriculum materials with names and addresses of distributors.

4 Bremer, Anne and Bremer, John. Open Education: a Beginning. New York: Holt, Rinehart, and Winston, 1972.

An informal book aiming to guide the traditional teacher gradually and sympathetically to practicing open education. The stress is on change of viewpoint on teaching, learning, communications, and education outside the classroom. Includes a detailed description of an organically or naturally developing learning situation.

5 Brown, Mary and Precious, Norman. The Integrated Day in the Primary School. New York: Agathon Press, Inc., 1969.

The Headmistress of the Church Hill Infant School and the Headmaster of the Church Hill Junior School, Thurmaston, Leicestershire, trace the development of the integrated approach to education of young children in Britain. The programs and facilities in their own schools are described in detail, and the cumulative records of five children are presented to illustrate the effects of this type of education on children's development.

6 The Change-over. [Motion Picture]. Produced by the British Broadcasting Corporation, 1966. (Discovery and Experience, 7).

Illustrates the gradual change from a traditional to a more flexible approach to education in one British classroom. Although the final stage, featuring varied activities and circular time-tabling, is not integrated education, the film is valuable for its portrayal of the process of change and the teacher's role in it.

7 Children Are People. [Motion Picture]. Produced by Stockwell College of Education. Released in Canada by Carman Educational Associates, 1970.

Although this film is specifically on vertical or family grouping in British infant and junior schools, it illustrates other aspects of integrated education as well. Special stress is placed on the unimportance of the architecture of the school and the importance of accepting pleasure, enjoyment, and interest as significant factors in learning.

8 Children As People. [Motion Picture]. Narrated by John Holt. Produced by Polymorph Films, 1969.

Portrays a wide range of activities at the Fayerwether School, Cambridge, Massachusetts, an open school in harmony with John Holt's approach to education. Good illustration of children relating to teachers and to each other in this type of environment.

9 Featherstone, Joseph. Schools Where Children Learn. New York: Liveright, 1971.

Reprints of articles from The New Republic from 1968-1971. Those on British infant and junior schools are excellent and did much to introduce the concept of open education in United States; the reporting on the American scene lacks consistency and substance.

10 Fullan, Michael. Recent School Innovations and Teacher Integration in the Organization. Paper presented to CAPE-CCRE-CERA Joint Conference, St. John's, Nfld., 1971. Toronto: The Ontario Institute for Studies in Education, 1971.

A section of this paper discusses the effect of the open school on the social relations within the school. Projecting from the criteria of the open school, there should be more interaction among teachers, disappearance of the authoritarian element from teacher-principal relations, and development of more dynamic learning relationships among teachers and students.

11 Fullan, Michael and others. Thornlea: a Case Study of an Innovative Secondary School. Toronto: The Ontario Institute for Studies in Education, 1972. (Profiles in Practical Education, 6).

Although written as a study of the process of innovation, this also provides a description of a secondary school based on the concept of open education. Information was collected mostly by in-depth interviews.

12 Haskell, Lucy A. British Primary Education: an Annotated Bibliography. Washington, D.C.: National Center for Educational Communication, Division of Information Resources, 1971. (Available from ERIC Document Reproduction Service ED 052 843).

An extensive bibliographic coverage of the reforms in British primary education in four parts: "Survey of English Education," "Contemporary Trends in Primary Education," "Curriculum Innovations," and "American Interpretations of British Pacemakers." The first two parts are thoroughly annotated, the third only partially, and the last not at all.

13 Hertzberg, Alvin and Stone, Edward F. Schools Are for Children; an American Approach to the Open Classroom. New York: Schocken Books, 1971.

The title is misleading; actually this is a detailed description of British primary schools by two American elementary school principals. However, direct, practical suggestions for adapting British practices to American classrooms are included.

14 Hucklesby, Sylvia. Opening Up the Classroom: a Walk Around the School. Washington, D.C.: National Center for Educational Communication, Division of Information Resources, 1971. (Available from ERIC Document Reproduction Service ED 053 817).

A nature walk is used to illustrate the objectives and techniques of open education.

15 Katz, Lillian. Research on Open Education: Problems and Issues. Urbana, Ill.: College of Education Curriculum Laboratory, University of Illinois, 1972. (Available from ERIC Document Reproduction Service ED 068 202).

Noting the lack of reliable evidence for the effectiveness of open education, the author proposes concentrating research efforts on preschool and primary years and the opening up of existing classrooms instead of creating new ones. Specific topics for research are suggested.

16 Kohl, Herbert R. The Open Classroom: a Practical Guide to a New Way of Teaching. New York: New York Review, 1969.

For the individual teacher in a traditional school, ways to open up his classroom and teaching gradually and effectively.

17 Learning by Doing. [Motion Picture]. Produced by the British Broadcasting Corporation, 1968. (Discussing and Experience, 1).

Learning through active experience is illustrated by a class of ten- and eleven-year-olds in Britain studying the woolen industry. The teacher provides the environment for learning both within and beyond the classroom.

18 Metropolitan Toronto. School Board. Study of Educational Facilities. Annotated Bibliography on Informal Education. Toronto: Metropolitan Toronto School Board, September, 1972.

A comprehensive bibliography on British informal education and American open education. A policy of frequent revisions ensures access to current literature in both fields.

19 Metropolitan Toronto. School Board. Study of Educational Facilities. Hints for Survival in Open Plan Schools. Toronto: Metropolitan Toronto School Board, 1973.

Discussion of the variety of teaching styles, administrative structures, and arrangements of facilities in open-space schools, mostly based on information from interviews conducted by SEF staff in open-space schools in Metropolitan Toronto. Aims to help the individual teacher make decisions about his role in this type of school.

20 Nyquist, Ewald B. and Hawes, Gene R. Open Education: a Sourcebook for Parents and Teachers. New York: Bantam Books, 1972.

A comprehensive collection of key articles on open education, covering topics such as basic philosophy and research, advantages, practice, and introduction of open education in schools. Along with an annotated bibliography, there are several useful lists: distributors of equipment and materials, elementary and secondary schools with open education programs, teacher preparation programs, and persons and organizations with experience in consultation.

21 Open Education: the Legacy of the Progressive Movement. Edited by Georgianna Engstrom. Proceedings of a Conference Sponsored by the National Association for the Education of Young Children. Washington, D.C.: National Association for the Education of Young Children, 1970.

A series of papers discussing British primary education, its applicability to the United States, and the relationship of open education to the earlier Progressive movement. The key article is Bernard Spodek's "Extending Open Education in the United States," in which he argues that since schools reflect society, the British model cannot be transplanted in the United States. Instead, open education should develop from roots in the Progressive movement.

22 Sargent, Betsye. The Integrated Day in an American School: a Curriculum Report for the Year 1968-69. Boston, Mass.: National Association of Independent Schools, 1970.

Written by the teacher of a mixed group of five-, six-, and seven-year-olds at Shady Hill School, Cambridge, Massachusetts, this report is a record of a year in an open classroom. Included are plans of arrangement of the room, evaluation of materials and activities, and detailed comments on the development of the children. A morning in this classroom was recorded on film: I Am Here Today. [Motion Picture]. Directed by Allan Leiterman. Produced by Education Development Center, Newton, Massachusetts, 1969.

23 Spodek, Bernard. In-Class Teacher Training for Open Education. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois, April, 1972. (Available from ERIC Document Reproduction Service ED 063 043).

A description of the work of the Open Education Project at the University of Illinois, concentrating on consultants or advisors and their role in teacher training for open education.

24 Taylor, Joy. Organizing and Integrating the Infant Day. London: Allen and Unwin, 1971.

The British experience in changing a traditional program to the integrated day. The importance of teacher training is stressed.

25 Thackray, John and others. "Open Door" New York City. New York: Center for Urban Education, Program Reference Service, 1970. (Available from ERIC Document Reproduction Service ED 048 410).

Started in 1968 in two public schools in New York City, the "Open Door" program was developed by Lillian Weber to serve as a continuation of "Head Start." The evaluation of the program lacks concrete evidence, being based on generalizations and observations that were not systematic.

26 Weber, Lillian. The English Infant School and Informal Education. New York: Prentice-Hall, 1971.

The first part is an overview of practices in British infant and primary schools, based on observations by the author from September, 1965, to May, 1966. The second part is an examination of the rationale for informal education, touching on the work of Susan Isaacs, Nathan Isaacs, Jean Piaget, Basil Bernstein, Jerome Bruner, and others.

2. Journal Articles

27 Berson, Minnie P. "Inside the Open Classroom." American Education, VII (May, 1971), 11-15.

The open classroom at Booker T. Washington Elementary School, Champaign, Illinois, is operated in connection with the teacher training program developed by Bernard Spodek at the University of Illinois. The program is designed to retrain classroom teachers and to prepare "teacher trainers."

28 Elliott, J. "St. Anthony's School: a Home Away from Home." Education Canada, XII (March, 1972), 30-34.

St. Anthony's School, Thornhill, Ontario, is an open-plan school for grades two to six. The children are grouped in families, with each child planning his program at the start of the day.

29 Eriksen, Aase and Fiske, Frederick M. "Teacher Adaptation to an Informal School." National Association of Secondary School Principals Bulletin, LVII (January, 1973), 1-9.

Describes the adjustment and interaction of teachers during the first three semesters at West Philadelphia Community Free School. Although developing effective methods of interaction was difficult, progress was made.

30 Comolak, Lou. "Open Education: 'The Most Sensuous Classroom That I've Ever Seen'." Nation's Schools, LXXXVII (May, 1971), 52-55.

A day in an open classroom of the New York City's "Open Door" Project developed by Lillian Weber.

31 Heaps, Kathleen. "Setting Up an Integrated Day in an Infants' School." Froebel Journal, (No. 17, June, 1970), 11-21.

An account of a gradual transition from a formal schedule to a flexible, unstructured day in a British infants' school for children aged four to six. Includes a thoughtful discussion of the problems of measurement and evaluation.

32 Milburn, Dennis. "Integrated Learning in the Primary Years." B.C. Teacher, LI (April, 1972), 268-74.

Discussion of the elements of integrated learning and some of the approaches used in integrated schools in British Columbia. The possibility of transfer of integrated techniques to different cultures is touched upon.

33 Mitchell, Joy and Zoffness, Richard. "Multi-Age Classroom." Grade Teacher, LXXXVIII (March, 1971), 55-61.

Two of the teachers of a pilot program encompassing seventy-six children aged seven to eleven at Central School, Larchmont, New York, describe a typical day and special activities in their classroom. In October, 1969, and May, 1970, the Stanford Achievement Test was administered to all fourth- and fifth-grade children in the school. The results seemed to favor the multi-age classroom over the self-contained ones, especially for pupils in the fifth grade.

34 Muskopf, Allan and Moss, Joy. "Open Education - an In-Service Model." Elementary School Journal, LXXIII (December, 1972), 117-24.

An account of a four-week intensive workshop on open education for thirty-two elementary school teachers. To give the teachers emotional experience with open education, the workshop was organized as an open classroom for adults.

35 "Open Education: an Expert Talks about its Implications for Reform." Nation's Schools, LXXXVII (May, 1971), 56-59.

Lillian Weber discusses the concept of open education and its implementation in the United States. Emphasis is placed on preparation necessary before open education is introduced in a school.

36 "Open Education: Can British School Reforms Work Here?" Nation's Schools, LXXXVII (May, 1971), 47-51.

This background article on the development of British infant schools includes discussion of theoretical basis and general criticisms of the system.

37 Pirsig, Nancy. "Bumpy Road to the Open School." American Education, VIII (October, 1972), 17-23.

Enthusiastic account of the founding and development of St. Paul's Open School, St. Paul, Minnesota, for children aged five to eighteen. Need for teacher training in creating stimulating resource areas and counseling of children is stressed.

38 Raggatt, Peter C.M. "Administration in British Primary Schools." National Elementary School Principal, LII (November, 1972), 25-29.

In Britain several factors in the educational system aided the development of integrated education. Curriculum policy and development are the responsibility of the head teacher and staff; there is no accountability to community; and the occupational security of the teachers is greater than in the United States. Lack of these factors in the American educational system may make the implementation of open education difficult.

39 Randazzo, Joseph D. "Does Open Education Really Work in a Urban Setting?" Phi Delta Kappan, LIV (October, 1972), 107-10.

The Follow Through program at John C. Clark Elementary School, Hartford, Connecticut, is described by recording the experiences of a seven-year-old during one school day.

40 "A School with a Plan and a Goal; John C. Clark School, Hartford, Conn." School Management, XVI (July, 1972), 37-39.

Description of the instructional philosophy and program as well as teacher training at this open-classroom elementary school.

41 Short, V.M. "Open Classroom." Education Canada, XII (June, 1972), 4-9.

A discussion of open education by the principal of Nova Scotia Teachers' College, Truro, based on extensive observations of open classrooms in Nova Scotia, California, Florida, England, and Germany. All have a similar structure: physical arrangement in interest areas, free movement and communication, and independent or small group work. Emphasis is on learning not teaching.

42 Weber, Mark. "Piecemeal Revolution: Controlled Freedom in the British Open Classroom." Library Journal, XCVII (November 15, 1972), 3775-79.

A brief account of the development of British primary education with emphasis on philosophical assumptions and reasons for the positive responses by children. Of special interest is the discussion of problems in introducing British techniques in the United States.

43 Windley, Vivian O. "A New Look at Teacher Education." Urban Review, V (March, 1972), 3-11.

Description of the Trainers of Teacher Trainers program at City College, City University of New York, which aims to prepare successful teachers for open classrooms by unified pre-service and in-service education.

B. Theory, Analyses, Definitions

1. Books and Reports

44 Barth, Roland S. "Open Education: Assumptions and Rationale." Unpublished qualifying paper, Harvard Graduate School of Education, 1968.

Analysis of open education in terms of assumptions about children's learning and the nature of knowledge. Each assumption implicit in open education is critically discussed; where appropriate, research needed for substantiation is pointed out. A key work among the attempts to establish criteria for openness and to define open education.

45 Burnham, Brian. Anatomy of Open Education: a Barebones Summary of its Assumptions as Related to Practices in Elementary Education and an Overview of its Accomplishments. Aurora, Ont.: York County Board of Education, 1970.

Analysis of open education based on the writings of Roland Barth, Barbara Biber, and Patricia Minuchin. Summarizes available research, pointing out that rigorous studies are still lacking.

46 Bussis, Anne M. and Chittenden, Edward A. Analysis of an Approach to Open Education: Interim Report. Princeton, N.J.: Educational Testing Service, 1970. (Available from ERIC Document Reproduction Service ED 050 125).

To arrive at a clearer conceptualization of open education programs and to design new measures for evaluation, relevant literature and the approach of the "Follow Through" program of the Education Development Center were analyzed. The child's role and the teacher's role in the education process were distinguished as the two crucial factors in measuring openness.

47 Chittenden, Edward A. and Bussis, Anne M. Open Education: Research and Assessment Strategies. Paper presented at the annual meeting of the National Association for the Education of Young Children, Minneapolis, Minnesota, November, 1971. (Available from ERIC Document Reproduction Service ED 060 932).

Proposal of a two-dimensional scheme for conceptualizing various kinds of educational environments by two sets of questions - one directed at the child as a learner, the other at the teacher's contribution to the nature and direction of learning.

48 Clegg, Alec. Revolution in the British Primary Schools. Washington, D.C.: National Association of Elementary School Principals, National Education Association, 1971.

A thoughtful analysis of the change in British primary education by one who has been directly involved in the process. Discusses the contributions of Bertrand Russell, Susan Isaacs, and Margaret and Rachel McMillan to the development of the ideas motivating the change, and stresses the need to understand and accept the basic principles before attempting to implement them.

49 Dopyera, John. What's Open About Open Education? Some Strategies and Results. Speech given at Elementary-Kindergarten-Nursery Educators Conference, Washington, D.C., January, 1972. (Available from ERIC Document Reproduction Service ED 059 168).

What makes a program open is the possibility of certain behaviors, activities, and events to occur. To measure openness on this basis, the author has developed the Open Program Structure Index (OPSI), which he has used to evaluate the openness of the programs of several schools.

50 Evans, Judith T. Characteristics of Open Education: Results from a Classroom Observation Rating Scale and Teacher Questionnaire. Newton, Mass.: Education Development Center, 1971. (Available from ERIC Document Reproduction Service ED 058 160).

The structure of the Classroom Observation Rating Scale is based on the work of Anne Bussis, Edward Chittenden, Herbert Walberg, and Susan Thomas. In application, the Scale differentiated open and traditional teaching styles. The CORS is included in the paper.

51 Katz, Lillian G. Open-Informal Education: Recommendations for Research and Development. Final Report. Urbana, Ill.: University of Illinois, College of Education, 1971. (Available from ERIC Document Reproduction Service ED 058 944).

A tentative definition of open education is established in terms of space, activities of children, source of activities, content of topics, organization of time, and teacher-child relationships, followed by a detailed discussion of research and development needed for the support and encouragement of its implementation in American schools.

52 Nelsen, Jerald. Open-Minded, Thought-Filled Education. Ellensburg, Wash.: Washington Center for Early Childhood Education, Central Washington State College, 1972. (Available from ERIC Document Reproduction Service ED 068 166).

Describes the WCECE Learning Model in terms of philosophical assumptions, conceptual goals, and evaluative categories. Based on the practices in British infant schools, the model was developed for Indian and migrant education but is not connected to any particular curriculum or teaching style. Gives specific examples of projects or activities carried through the stages of choice, planning, execution, evaluation, and reporting.

53 O'Sullivan, Kevin D. "Symbolic Structures in the Classroom." Unpublished M.A. dissertation, University of Toronto, 1970.

Analyzes the symbolic structures of traditional and open education.

54 Rathbone, Charles H. "Open Education and the Teacher." Unpublished Ed.D. dissertation, Harvard University, 1970. (Dissertation Abstracts International, XXXI, 2237-A).

Discussion of epistemological and ethical ideology of open education and its implications for teacher training. Programs for teacher education should be consistent with the theories behind open education, such as flexible, individualized curriculum and emphasis on affective education.

55 Sherman, Vivian S. Two Contrasting Educational Models: Applications and Policy Implications. Menlo Park, Cal.: Stanford Research Institute, 1970. (Available from ERIC Document Reproduction Service ED 061 750).

Analysis of structure and openness in education as two antithetical models, contrasting basic assumptions, values, and latent dangers of each. The compatible personality and context of each is described.

56 Traub, R.E. and others. Closure on Openness: Describing and Quantifying Open Education. Toronto: The Ontario Institute for Studies in Education, 1972. Also in Interchange, III No. 2/3, 1972), 69-84.

Dimensions of Schooling (DISC) is a questionnaire for teachers designed to obtain information on aspects of school life important in open education. Thus it can be used to measure the degree of openness of a program.

57 Walberg, Herbert J. and Thomas, Susan Christie. Characteristics of Open Education: a Look at the Literature for Teachers. Newton, Mass.: Education Development Center and T.D.R. Assoc., 1971. (Available from ERIC Document Reproduction Service ED 038 164).

An attempt to establish an operational definition of open education. The eight major themes delineated by Anne Bussis and Edward Chittenden were used as the basis for analysis of twenty-eight selected authors, resulting in a list of pedagogical characteristics of open education.

58 Walton, Jack, ed. The Integrated Day in Theory and Practice. Papers and proceedings of a Conference on the Integrated Day in the Primary School, Institute of Education, University of Exeter, January, 1970. London: Ward Lock Educational, 1971.

This collection of papers reveals that the British are having just as much difficulty defining "integrated day" as the North Americans have with "open education." Of special interest is the article "A Psychologist's Reflections on the Integrated Day Approach," in which Terence Davis criticizes too exclusive reliance on Piaget's work and the lack of research to support claims for accomplishments.

2. Journal Articles

59 Barth, Roland S. "Starting Open Classrooms: Some Assumptions." National Elementary Principal, LII (November, 1972), 68-69.

A recent, concise version of the ideas expressed by the author in his paper "Open Education: Assumptions and Rationale," 1968, and his article "So You Want to Change to an Open Classroom," Phi Delta Kappan, LIII (October, 1971), 97-99. Since open education is based on specific assumptions about knowledge and children's learning, these should be fully recognized and considered by teachers and administrators before starting open classrooms.

60 Barth, Roland S. "When Children Enjoy School: Some Lessons from Britain." Childhood Education, XLVI (January, 1970), 195-200.

Discusses characteristics of British infant and junior schools where a large number of children appear to be enjoying school. Among conditions noted are: significant options and choice of activity; ability to pose own problems; freedom to collaborate with peers; situations of trust and order without authoritarianism; and minimal performance comparison.

61 Marshall, H.H. "Criteria for an Open Classroom." Young Children, XXVIII (October, 1972), 13-19.

From analysis of literature on classroom observation, three categories of criteria for evaluating the openness of a classroom were distinguished. The first two categories have nine criteria essential to every open classroom; the criteria in the third group enhance openness but only if the first nine are also present.

62 Moran, P.R. "The Integrated Day." Educational Research, XIV (November, 1971), 65-69.

From a survey questionnaire distributed to 262 teachers who attended the Conference on the Integrated Day, University of Exeter, on January, 1970, it was determined that the term "integrated day" is applied to five different types of practice. The constant element is a variety of ongoing activities in the classroom.

63 Rathbone, Charles H. "Examining the Open Education Classroom." School Review, LXXX (August, 1972), 521-49.

Four significant organizational features of the open-education environment are distinguished: organization of space, time, instruction, and the grouping of children. Stresses the need for critical analysis of open education to establish clearer goals and better means of evaluation and for research to determine its appropriateness in terms of types of children and kinds of learning.

64 Rathbone, Charles H. "The Open Classroom: Underlying Premises." Urban Review, V (September, 1971), 4-10.

This discussion of the theoretical basis of open education is closely related to that by Roland Barth.

65 Spodek, Bernard. "Alternatives to Traditional Education." Peabody Journal of Education, XLVIII (January, 1971), 140-46.

The focus in this discussion of the assumptions behind open education is on the decision-making process in the open classroom. Difficulties in evaluating effects of open education are pointed out.

66 Tatis, Rita. "Opening Up Education: a Guide to New Vocabulary." Journal of Teacher Education, XXIII (Spring, 1972), 83-91.

An attempt to define terms such as "open education," "open classroom," "open school," "free school," "open university" by examples and citations from literature on the subject. Helpful for clarifying distinctions among these labels, which are often used interchangeably.

67 Walberg, Herbert J. and Thomas, Susan Christie. "Open Education: a Classroom Validation in Great Britain and the United States." American Educational Research Journal, IX (Spring, 1972), 197-208.

Eight themes of open education were distinguished by examining literature and questioning teachers. Questionnaires constructed on the basis of these, combined with observation, could clearly differentiate between open and traditional classrooms. Open classrooms in Britain and United States were found to be very similar.

C. Research

1. Books and Reports

68 Bartel, Nellie R. and others. Individual Differences in Open Education. Philadelphia, Pa.: Temple University, 1971. (Available from ERIC Document Reproduction Service ED 063 697).

To assess implications of open education practices for special education, a study of the effect of open education on children's success in school is being conducted in Philadelphia. Children entering open classrooms in kindergarten and grade one in the fall of 1971 were matched with children entering traditional classrooms by scores on the Slosson Verbal Aptitude Test and the Philadelphia Readiness Test. For two years the children will be compared on attendance, standardized achievement scores, grade repetition, and rate of referral to special education.

69 Burnham, Brian. A Day in the Life; Case Studies of Pupils in Open Plan Schools. Aurora, Ont.: Research Office, York County Board of Education, 1970. (Available from ERIC Document Reproduction Service ED 067 725).

To determine how pupils are affected by innovative, open-plan schools, seven pupils in open-plan and three in control schools were shadowed for one day. The sample consisted mostly of boys in senior public schools. Two significant observations were made in connection with all pupils in open-plan schools: they had opportunity to exercise personal responsibility, and they related positively to teachers and other pupils.

70 Dill, Nancy L. "An Inquiry Into Curriculum Theories and Open Classroom Practices." Notre Dame Journal of Education, III (Summer, 1972), 140-50. (Also available from ERIC Document Reproduction Service ED 065 472).

Applying a network analysis of activities, events, and connections, developed by herself, to open classrooms kindergarten to grade six, the author found that children often avoid some curriculum areas and that the sequence of activities is very individualistic. These findings suggest a change from a structured curriculum to an evolving one based on curriculum components.

71 Johnson, Gerald F.J. and Page, William C. Selected Classroom Project - Helping Traditional Teachers to Plan and Implement Student-Centered Classrooms. New Buffalo, Mass.: Project COD, 1971. (Available from ERIC Document Reproduction Service ED 055 962).

From October, 1970, to June, 1971, twenty-one selected teachers were given aid in opening up their classrooms through special workshops. Evaluation by formal observation, examination of the teachers' journals, and codification of questionnaires answered by students, principals and teachers, indicated that all the teachers had moved toward practicing open education during the school year.

72 Knight, Melvin Ernest. "A Critical Documentary Film Study of the School Administrator's Role in New and Emerging Organizational Patterns and in the Operation of an Innovative, Open-Space School." Unpublished Ed.D. dissertation, Auburn University, 1971. (Dissertation Abstracts International, XXXII, 2957-A).

Detailed observation and in-depth interviews were used to examine the roles of six administrators in three innovative, open-space secondary schools. Focus of the study is on a comparison between perceived and true roles.

73 McPartland, James and others. Student Reactions to the Transition from Open Elementary School to Junior High School: a Case Study. Baltimore, Md.: Center for the Study of Social Organization, John Hopkins University, 1972. (Available from ERIC Document Reproduction Service ED 069 040).

To study the effect of an open elementary school on student adjustment to a traditional junior high school, all sixth-grade pupils in one open and one traditional elementary school were asked to fill out a questionnaire. A year later the adjustment of a subsample of about one-third of these students was examined in terms of average grades, number of absences and tardiness, and scale of discipline problems. In general, the students from the open elementary school had no special problems of adjustment and were as satisfied with the junior high school as those from the traditional elementary school.

74 Morse, Philip S. A Survey of Selected, Public, Elementary Open Classrooms in New York State. Final Report. Rochester, N.Y.: Rochester University, 1972. (Available from ERIC Document Reproduction Service ED 067 747).

A detailed examination of practice in five open classrooms to determine to what extent they conform to the model of open education expounded by Charles Rathbone. Though individual instruction was practiced to some extent in all classrooms, the roles of students and teachers in the learning process varied widely. Teachers were very positive about multi-age grouping, but subject areas were rarely integrated. Recommends better training for teachers, a more clearly defined role for principals, and the development of effective evaluation tools as the key factors in improving open education.

75 Overview and Evaluation of Project LEM; Innovative Education In Action. Hackensack, N.J.: Hackensack Public Schools, 1972. (Available from ERIC Document Reproduction Service ED 069 822).

LEM (Learning Experience Module) incorporates certain aspects of open education: multi-age grouping, individually designed instruction, unstructured curriculum, differentiated staffing, and flexible use of space. Project LEM implemented the module in grades two to six at the Fanny M. Hillers School, with special pre-service and in-service training for the teachers involved. Evaluation showed successful staff development and positive parental attitudes to the project. The results of the California Achievement Test administered to the children appeared to show a greater rate of improvement than expected.

76 Resnick, Lauren B. Teacher Behavior in an Informal British Infant School. Pittsburgh, Pa.: University of Pittsburgh, Learning Research and Development Center, 1971. (Available from ERIC Document Reproduction Service ED 059 181).

Systematic description of teacher behavior in British informal classrooms, concentrating on patterns of teacher-child interaction. The author observed four classrooms, coding the collected information according to categories established from an initial observation.

77 Sackett, John William. "A Comparison of Self-Concept and Achievement of Sixth Grade Students in an Open Space School, Self-Contained School, and Departmentalized School." Unpublished Ph.D. dissertation, University of Iowa, 1971. (Dissertation Abstracts International, XXXII, 2372-A).

The Self-Esteem Inventory and the Iowa Test of Basic Skills were administered to sixth-grade students in an open-space, innovative school and two conventional schools. Although the mean achievement of the pupils in the open-space school was only slightly lower, their mean self-concept score was significantly below that of the children in the two conventional schools.

78 Taylor, Ann Baldwin. "A Study of Open Classroom Environments in Early Childhood Education and Implications for Teacher Education." Unpublished Ph.D. dissertation, University of Pittsburgh, 1972. (Dissertation Abstracts International, XXXIII, 4235-A).

The social-emotional environments of open classrooms were described from observations and the application of Withall Social-Emotional Climate Index and Children's School of Carnegie-Mellon University Teacher Record Scale. It was concluded that experienced teachers are more learner-centered and encourage more interaction among pupils; therefore, it is important to combine theory and practice in pre-service and in-service training programs for teachers.

79 Wain, Olev. "The Effects of Introversion-Extraversion on Achievement in Graded and Nongraded Schools." Unpublished M.A. dissertation, University of Toronto, 1972.

Using DISC criteria to determine the openness of programs, eight elementary schools were selected for the sample - four closed, two mixed, and two open schools. Tests were given to all fifth-grade pupils in these schools. The results confirmed that for females extraversion is positively related to achievement in both open and closed programs. For males, high extraverts were better scholastically than low ones in closed schools but even more so in open schools. However, low extraverts had higher achievement in mixed schools.

80 Walker, Jess Morgan. "A Comparative Study of Personalized Reading In Open-Learning Environment and Basal Text Reading In Traditional-Learning Environment through Early Elementary Pupil Achievement." Unpublished Ph.D. dissertation, Michigan State University, 1972. (Dissertation Abstracts International, XXXIII, 4817-A).

To determine possible differences in the effectiveness of teaching reading by individual instruction in an open-learning environment rather than by using basal texts in a traditional classroom, first-, second-, and third-grade children from both of these environments were administered the Metropolitan Achievement Test at the start and end of the school year. There were no significant differences in the mean scores of the two groups of pupils.

81 Wilson, F.S. and others. Are Pupils in the Open Plan School Different? Paper presented to the Seventh Canadian Conference on Educational Research, Victoria, B.C., January, 1969. Ottawa: Canadian Council for Research in Education, 1969. Also in Journal of Educational Research, (November, 1972), 115-18.

In suburban Toronto, eleven- and twelve-year-olds from a new open-plan, open-education school, an established open-education school of traditional design, and two traditional schools were tested on three aspects: attitudes to school and themselves, level of curiosity, and level of productive thinking. Pupils from the open schools were more positive toward school and themselves than those from traditional schools. There were no significant differences in levels of curiosity, but the pupils from the new open school scored lower in creativity.

2. Journal Articles

82 Bieler, M. and others. "Comparison of Yielding to Influence in Open and Traditional Classroom." Childhood Education, XLIX (October, 1972), 45-46+.

A general-knowledge questionnaire with answers circled, some correctly and some incorrectly, was given to thirty-six third-grade pupils, half from an open classroom and half from a traditional one. On hard questions children from the open classroom were more likely to follow their own intuition than to use the answers already circled.

II. OPEN PLAN

A. Designs and Descriptions

1. Books and Reports

83 American Association of School Administrators. Commission on Open Space Schools. Open Space Schools; a Report. Washington, D.C.: American Association of School Administrators, 1971. (Available from ERIC Document Reproduction Service ED 070 204).

Discusses planning, designing, and construction of open-space schools, giving examples of specific schools worthy of examination. Photographs and sketches are included.

84 Frazier, Alexander. Open Schools for Children. Washington, D.C.: Association for Supervision and Curriculum Development, 1972. (Available from ERIC Document Reproduction Service ED 069 035).

Examines the relationships among open space, open structure, and open curriculum, with the most extensive treatment given to space. After tracing the development of the open-area design of schools, the author points out some current problems, such as "the warehouse look" and the need for space for specialized work.

85 Great Britain. Department of Education and Science. 'Open Plan' Primary Schools; Educational Survey 16. London: Her Majesty's Stationery Office, 1972.

Resulting from Her Majesty's Inspectors' visits to fifty-three open-plan primary schools, this report covers educational criteria, grouping of children, and preparation of teachers, as well as adequacy of facilities and equipment. Problems encountered are similar to those discussed in North American literature on open-plan schools.

86 Gross, Ronald and Murphy, Judith. Educational Change and Architectural Consequences; a Report on Facilities for Individualized Instruction. New York: Educational Facilities Laboratories, 1968. (Available from ERIC Document Reproduction Service ED 031 061).

These designs and criteria of spaces for new approaches to education in pre-primary, primary, middle, and secondary schools are meant to stimulate new perspectives on planning actual schools.

87 Ontario. School Planning and Building Section. Open Space General Learning Facilities for Kindergarten Primary and Junior Students. Toronto: Ontario Department of Education, 1971. (Available from ERIC Document Reproduction Service ED 060 523).

A detailed planning aid for indoor learning facilities for kindergarten, primary, and junior levels, and outdoor play areas for kindergarten. Layouts, sketches, and plans, as well as requirements for materials and equipment, are included.

88 Ontario Institute for Studies in Education. Department of Educational Administration. Open Plan Schools in Ontario. Directory. Toronto: The Ontario Institute for Studies in Education, 1971.

A listing of open-plan schools by boards of education. Compiled from information submitted by the boards.

89 Schools Without Walls; Profiles of Significant Schools. New York: Educational Facilities Laboratories, 1965. (Available from ERIC Document Reproduction Service ED 018 151).

One of the earliest reports on open area defines the concept and discusses related aspects such as furniture and equipment, use of partitions, scheduling, and relationship to educational innovation. Included is a portfolio of plans of existing open-area schools.

2. Journal Articles

90 Anderson, Carl. "Open-Plan Schools: Time for a Peek at Lady Godiva." Education Canada, X (June, 1970), 3-6.

From experience in administering open-plan schools, the author lists basic requirements for successful functioning: space flexibility, meaningful programs, planning time for teachers, and a variety of specializations among teachers. Possibly open areas are more suitable for the education of four- to eight-year-olds and for the development of senior high school students.

91 Anderson, Carl. "A Second Look at Lady Godiva." Education Canada, XII (December, 1972), 17-22.

An extension of the earlier article by the author, with emphasis on the need for a different approach to education to suit the open area. The critical stance of the article is aimed at provoking discussion on the merits and weaknesses of the open-plan design.

92 "BC School Goes Up for a Diminishing Population." School Administration, V (September, 1968), 29-32.

Based on the work of Educational Facilities Laboratories, the public school at Hudson's Hope, British Columbia, consists of three octagons. Two of them are open-area classrooms, each for 175 pupils. Five trailers are used to provide space for the temporarily excess number of pupils connected with the Hydro building project.

93 "Calgary Designs for Change." School Progress, XXXVII (August, 1968), 47-48.

The Marlborough Elementary School in Calgary is designed as a cruciform with a general teaching area in each of the three wings. Separate facilities are provided for art, music, and science.

94 Fielder, John. "Kids Luv Allandale." School Progress, XXXVII (June, 1968), 44-47+.

Designed by W. Millet Salter to suit a continuous-progress program, Allandale Heights School in Barrie, Ontario, has five learning pods around a core which contains a general purpose room, a resource center, and washrooms. Each learning pod has three learning areas. Plan is included in the article.

95 Graves, Ben E. "Enclosed Open Spaces." Nation's Schools, XCI (April, 1973), 64-67.

Brenda Dunson and David Hule, school planners in Washington, D.C., have designed several ways to create open space in old buildings. Included are four different plans for opening up a single classroom and two approaches to converting a series of classrooms to an open arrangement.

96 "Here's a Team Teaching School." School Progress, XXXVI (April, 1967), 54-56.

North Bridlewood Junior Public School, Scarborough, Ontario, has twelve class areas with movable partitions. Each class area can accommodate four teachers working with 120 children. Plans are included.

97 MacGregor, A. and others. "Traditional Classroom - Never!" Monday Morning, VI (November, 1971), 11-16.

Enthusiastic account of teaching experiences at Huntington Hills Elementary School, an open-area school in Calgary. The educational program features team-teaching, but otherwise is not innovative.

98 "New Vancouver School Uses Open-Space Teaching Area for Four Classes at Once." School Progress, XXXV (November, 1966), 40-41.

This school has three multi-class teaching areas, two for 160 students each and one for eighty students. For each of the large rooms there are four teaching posts but no partitions. The gymnasium also serves as the lunchroom and the auditorium.

99 "Open Plan." School Management, XV (August, 1971), 8-17.

A composite of three articles, the first of which describes the development of the open-space design from team schools to the open schools in the middle 1960's. The following two examine specific schools: the open high school at Little Falls, New York, and the Village South Elementary School, Centerville, Ohio. The latter was designed by a committee of teachers with the help of an architect.

100 "St. Avila." School Progress, XXXIX (April, 1970), 38-39.

An open-area addition accommodating 168 pupils, grades one to six, was built to traditionally designed St. Avila School, Fort Garry, Manitoba, in 1968. A comparison of the children in the two types of facilities in June, 1969, seemed to favor the ones in the open area in terms of academic improvement and personal adjustment. Plan of the school is included.

101 Salter, W. Millet. "Curriculum and the School Building." Canadian School Journal, XLV (September/October, 1967), 20-23.

Describes five elementary school plans ranging from nearly traditional to progressively more open in design. Not specific educational practices but the needs of teachers and pupils should be the bases for school design.

102 Schoales, R.D. "Children on a New Frontier in London's Open Plan Schools." Ontario Education, II (May/June, 1970), 12-13.

Traces the development of open-plan schools in London, Ontario, starting with Sir George Etienne Cartier School in 1967. A committee on open-plan schools meets monthly to evaluate, plan, and solve problems.

B. Research

1. Books and Reports

103 Brunetti, Frank A. Open Space: a Status Report. Stanford, Cal.: California School Planning Laboratory, Stanford University, 1971. (Available from ERIC Document Reproduction Service ED 057 485).

In general, open space architecture without a change in program has no consistently measurable effect on student achievement. High school students assessed in terms of self-direction and independence displayed these traits most strongly in independent study in an open-space environment, less in independent study in a conventional facility, and least in a conventional program in a conventional classroom.

104 Brunetti, Frank A. "The Teacher in the Authority Structure of the Elementary School; a Study of Open-Space and Self-Contained Classroom Schools." Unpublished Ph.D. dissertation, Stanford University, 1970. (Dissertation Abstracts International, XXXI, 4405-A).

To determine the effect of open-space schools on teacher-principal relationships, 110 teachers from eight open-space elementary schools and 120 teachers from seven conventional schools were

interviewed, observed, and asked to fill out a questionnaire. The data showed that increased interaction among teachers in the open school reduces the authority of the principal.

105 Burnham, Brian. Achievement of Grade I Pupils in Open Plan and Architecturally Conventional Schools. Aurora, Ont.: York County Board of Education, 1971. (Available from ERIC Document Reproduction Service ED 065 908).

The Canadian Cognitive Abilities Test and the Metropolitan Achievement Test were administered to first-grade pupils in two open-plan schools and nine conventional schools. There were no significant differences in the mean scores between the two groups.

106 Cooke, Geoffrey. "Teachers' Roles and Structural Differentiation." Unpublished Ph.D. dissertation, University of Toronto, 1971.

A sociological analysis and comparison of the learning situation in open-area and conventional classrooms in terms of teacher and student roles. Data was collected by interviewing 164 teachers of mathematics, English, and social studies in thirteen open-space and thirteen conventional senior public schools; three-fourths of the teachers also answered a questionnaire.

107 Heimgartner, Norman Louis. A Comparative Study of Self-Concept: Open Space Versus Self-Contained Classrooms. Greeley, Col.: University of Northern Colorado, 1972. (Available from ERIC Document Reproduction Service ED 069 389).

To determine the effect of facilities on the development of children's self-concept, 103 pupils aged five to ten from an open-space school and a control group of 113 from a conventional school were compared on the basis of results from Self-Social Symbol Tasks and Children's Self-Social Constructs Test. While the children in the open-space school gained self-esteem and progressed in individuation, the ones in the conventional school suffered a slight loss in both of these aspects.

108 Jaworowicz, Edward H. "Open-Space School Design as a Situational Determinant of Organizational Climate and Principal Leader Behavior." Unpublished Ph.D. dissertation, Wayne State University, 1972. (Dissertation Abstracts International, XXXIII, 2028-A).

Conducted in the Windsor Separate School District, Windsor, Ontario, this study on the effects of the open-space school on the patterns of interaction between the principal and teachers concludes that the design itself does not produce any alterations. Surprisingly, principals moving to open-space schools were similar in philosophical orientation toward openness to those staying in traditional schools.

109 Kyzar, Barney L. Comparison of Instructional Practices in Classrooms of Different Design. Final Report. Natchitoches, La.: Northwestern State University, 1971. (Available from ERIC Document Reproduction Service ED 048 669).

An open-plan secondary school and three open-space elementary schools were matched with conventional schools to compare practices and problems. Although teachers in the open-plan schools frequently commented on noise and absence of walls as problems, there was no difference in the over-all sound-levels between the open-plan and conventional schools. No conclusive differentiation in the instructional programs could be distinguished.

110 LaForge, Herman Eugene. "The Effect of the Open Space Design of an Elementary School upon the Personality Characteristics of Students." Unpublished Ed.D. dissertation, University of Houston, 1972. (Dissertation Abstracts International, XXXIII, 1365-A).

Although the students in the open-space elementary school tended to be more sympathetic to others than those in a conventional school, the open-space design does not have a significant effect on the total personality. Conclusion was based on data collected by the Children's Personality Questionnaire from sixth-grade pupils and by the High School Personality Questionnaire from seventh- and eighth-grade students at one open-space and one conventional elementary school.

111 Ledbetter, Thomas A. "A Study of Open Spaces for Teaching." Unpublished Ed.D. dissertation, University of Tennessee, 1969. (Dissertation Abstracts International, XXX, 3196-A).

Analysis of open-space schools, elementary to secondary, in terms of design, instructional programs, and teacher and student satisfaction. Although teachers at all levels were generally positive about open space, elementary school teachers liked it the most. Students approved of open facilities more than teachers. In all schools instructional programs were gradually changing to suit the more flexible facility.

112 Lynch, Peter. The Effects of the Different Learning Environments Found in Open Plan Learning Communities and in Self-Contained Classrooms on the Attitudes and Perceptions of Grade Five and Six Pupils. Toronto: The Ontario Institute for Studies in Education, 197?.

A questionnaire was given to all pupils in grades five and six in an elementary school; forty-five of the children were in open-plan and sixty-four in self-contained classrooms. Contrary to expectations, the pupils in the open areas had less feeling of anonymity and better perceptions of their teachers' expectations than those in the conventional classrooms.

113 McCallum, Carol June. "Children's Problems as Perceived by Children and Teachers in Open-Space Team-Teaching and Traditional Elementary Schools." Unpublished Ph.D. dissertation, University of Colorado, 1971. (Dissertation Abstracts International, XXXII, 6764-A).

Comparing the problems of children in open-space schools and traditional schools in Denver, Colorado, the researcher concluded that the type of school has no effect on the kinds of problems children have or on the depth and duration of the problems. The sample consisted of 480 children in four schools.

114 McRae, B.C. Effect of Open-Area Instruction on Reading Achievement. Vancouver: Department of Research and Special Services, Vancouver Board of School Trustees, 1970.

The Gates-MacGinitie Reading Test was administered to thirty-four students from open-area and the same number from traditional classrooms entering the Windermere Secondary School in Vancouver. The students from the open area read less well, showing significantly lower scores on speed and accuracy, vocabulary, and comprehension.

115 Metropolitan Toronto. School Board. Study of Educational Facilities. SEF - Academic Evaluation. An Interim Report. Toronto: Metropolitan Toronto Board of Education, 1972. (Available from ERIC Document Reproduction Service ED 061 598).

From March, 1970, to September, 1971, a comparative study was conducted of eight SEF schools, four other open-plan schools, and four traditional-design schools in terms of users, programs, facilities, activity patterns, and environment modifications. The greatest differences were found between all open-plan schools and traditional schools; the open-plan schools were more satisfactory to users.

116 Meyer, John and others. The Impact of the Open-Space School upon Teacher Influence and Autonomy: the Effects of an Organizational Innovation. Stanford, Cal.: Stanford Center for Research and Development in Teaching, Stanford University, 1971. (Available from ERIC Document Reproduction Service ED 062 291).

Data was collected from 110 teachers in nine open-space elementary schools and 120 teachers from eight traditional elementary schools. In general, teachers in the open-space schools were more satisfied with their jobs and felt that they had more autonomy in their work as well as more influence in making decisions affecting the whole school.

117 Mills, Frederick Mark. "A Comparison of Teacher Performance and Attitudes of Teachers Performing Independently in Self-Contained Classrooms and Teachers Performing Co-operatively in Open Instructional Areas." Unpublished Ed.D. dissertation, Arizona State University, 1972. (Dissertation Abstracts International, XXXIII, 2038-A).

To determine the effect of co-operative teaching in an open area on teacher performance and attitudes, the performances of sixty teachers in open-space and traditional classrooms were measured by the Instrument for the Observation of Teaching Activities. The teachers in open areas had better classroom performance and more competence in professional activities outside the classroom than their counterparts in self-contained facilities. Furthermore, they were more accepting and supportive toward their students.

118 Moodie, Alan G. A Survey of Reading Achievement in a Secondary School Population. Vancouver: Vancouver Board of School Trustees, 1971. (Available from ERIC Document Reproduction Service ED 058 248).

To compare reading achievement of pupils in open-area and conventional classrooms, a sample of students was administered the Gates-MacGinitie Reading Test in grade seven and again in grade eight. Although the results of the first testing showed the students from open areas reading less well than those from conventional classrooms, the difference in mean scores of the second testing was no longer significant.

119 Moodie, Alan G. A Survey of Teachers' Opinions Regarding Open-Areas. Vancouver: Vancouver Board of School Trustees, 1971. (Available from ERIC Document Reproduction Service ED 057 102).

In this survey conducted in 1970-1971, most of the 106 teachers, all of whom had experience in teaching in open areas, approved of the open-space concept. Lack of space, unsuitable equipment, insufficient training, and not enough time for preparation were some of the problems concerning the teachers. The questionnaire used in the survey is included.

120 Richardson, David Ira. "A Study of In-Service Education Practices for Open-Plan Schools." Unpublished Ed.D. dissertation, University of Tennessee, 1970. (Dissertation Abstracts International, XXXI, 3398-A).

Describes a program of in-service training of teachers in open-space schools. The model is based on needs expressed by teachers in questionnaires and structured interviews.

121 Townsend, James W. "A Comparison of Teacher Style and Pupil Attitude and Achievement in Contrasting Schools - Open Space, Departmentalized, and Self-Contained." Unpublished Ed.D. dissertation, University of Kansas, 1971. (Dissertation Abstracts International, XXXII, 5679-A).

The teachers and pupils of grades two and six in three elementary schools representative of the open-space, departmentalized, and self-contained concepts were used as the sample for this study. Although little difference was found in teaching styles among the schools, the pupils in the departmentalized and self-contained schools had higher achievement in more subject areas than the pupils from the open-area elementary school.

122 Warner, Jack Bruce. "A Comparison of Students' and Teachers' Performances in an Open Area Facility and Self-Contained Classrooms." Unpublished Ed.D. dissertation, University of Houston, 1970. (Dissertation Abstracts International, XXXI, 3851-A).

An experimental study conducted in an elementary school of conventional design with an open-area addition. Since the instructional program was the same in both facilities, the only variable was the design of space. There were no differences in achievement scores and the interaction between teachers and pupils. However, in the open area, space was used more flexibly, and more supplementary materials, as well as greater variability in grouping of pupils, were employed by the teachers.

123 Wren, Sara Jean Pennington. "A Comparison of Affective Factors between Contained Classrooms and Open Area Classrooms." Unpublished Ed.D. dissertation, University of Houston, 1972. (Dissertation Abstracts International, XXXIII, 1397-A).

A study of third-, fourth-, and fifth-grade pupils at the same elementary school that was used by Jack Warner in his research. The open-area experience promoted the development of favorable attitudes in students, teachers, and parents. The hypothesis that open areas might increase anxiety in children was contradicted.

2. Journal Articles

124 Brunetti, Frank A. and others. "Studies of Team Teaching in the Open-Space School." Interchange, III (No. 2/3, 1972), 85-101.

An inconclusive study of the effect of team-teaching, open-space schools on the job satisfaction of teachers and the activity of students. Since it was difficult to distinguish the effect of team teaching from that of open-space, it was not possible to determine which of the two is the important factor.

125 Matheson, G.P. "Should You Go Ahead with Open Area?" School Progress, XXXIX (May, 1970), 48-49.

A survey of teachers' reactions to teaching in open areas in Burnaby, Surrey, North Vancouver, Port Coquitlam, and Port Moody, British Columbia. Although the strain on them is greater, generally teachers are positive about open areas, feeling that children are better motivated and disciplined and achieve more in this type of school. Wide use is made of special groupings and individual instruction in teaching.

126 Myers, R.E. "A Comparison of the Perceptions of Elementary School Children in Open Area and Self-Contained Classrooms in British Columbia." Journal of Research and Development in Education, IV (Spring, 1971), 100-06.

The Ideal Teacher Checklist was administered to a group of pupils in third grade or above in open-space classrooms and a control group in self-contained classrooms. The children in the open area appeared to be less dependent on the teacher and placed more emphasis on the fairness of the teacher.